

NITROGEN & CARBON CYCLES

Through this web quest you will learn about the nitrogen and carbon cycles. We know that matter continually cycles through different parts of the Earth, including both living and non-living things.

THE TASK:

- 1) Navigate to the designated website.
- 2) Click "PLAY VIDEO"
- 3) As you watch each clip, be sure to take notes! *HINT: you can pause and rewind the clips as needed.*
- 4) 4) Once complete, review your notes, study the visual diagram
- 5) When ready, click "TAKE THE QUIZ".

SECTION #1 THE NITROGEN CYCLE

D) My Notes

- a. True or False: All bacteria is bad.
- b. The Nitrogen Cycle is _____

- c. True or False: Animals & plants **can't** use nitrogen as a gas
- d. First: Nitrogen gas travels from the _____ to the _____ and right into the nodules.
- e. Then the **bacteria** turn the nitrogen into _____
- f. Plants **can't** use the ammonia, so the bacteria in the soil **change it into** _____
- g. Plants **still** can't use the nitrites so a different **bacteria** turn it into _____
- h. That whole process is called _____
- i. If **plants** get **nitrates** from the **soil**, where do animals get nitrates from?
_____ or from other animals that eat plants.
- j. How do the nitrates **turn back into nitrogen gas**? Plants and animals _____ and they excrete (release)

- k. Everything decays and _____ thanks to a special bacteria called _____
Decomposers are bacteria which _____

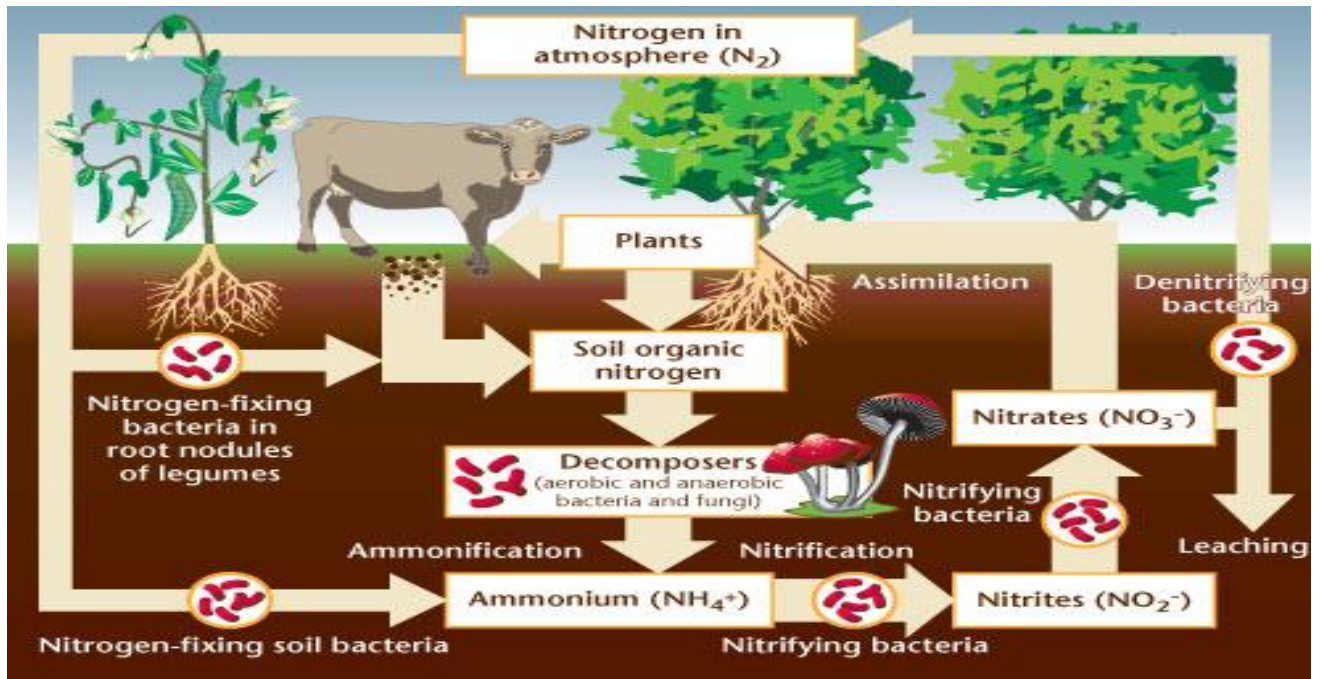
Summary:

Summarize the points at the end of the clip in your own words:

1. _____
2. _____
3. _____
4. _____

However, **nitrogen buildup** in the air can cause _____ and _____. That can be very problematic can cause lots of breathing issues.

2) Visualize It!



3) Quiz Yourself

1. What is the nitrogen cycle?

2. How do humans get nitrogen?

3. What comes first in the process of nitrification?

4. How do nitrates turn back into nitrogen gas?

5. What is one of the key components of the nitrogen cycle?

6. What do plants and animals use nitrates for?

7. How are people upsetting the nitrogen cycle?

RECORD YOUR SCORE BELOW

Your score: ____/7 and ____%

SECTION #2 THE CARBON CYCLE

D) My Notes

a. Many scientists think global warming might be one of the things that makes the earth

b. The Greenhouse Effect is

- c. Carbon
- An ELEMENT
 - Found in every _____
 - Constantly being recycled _____
- d. The CARBON CYCLE is

e. Respiration is

f. Photosynthesis is

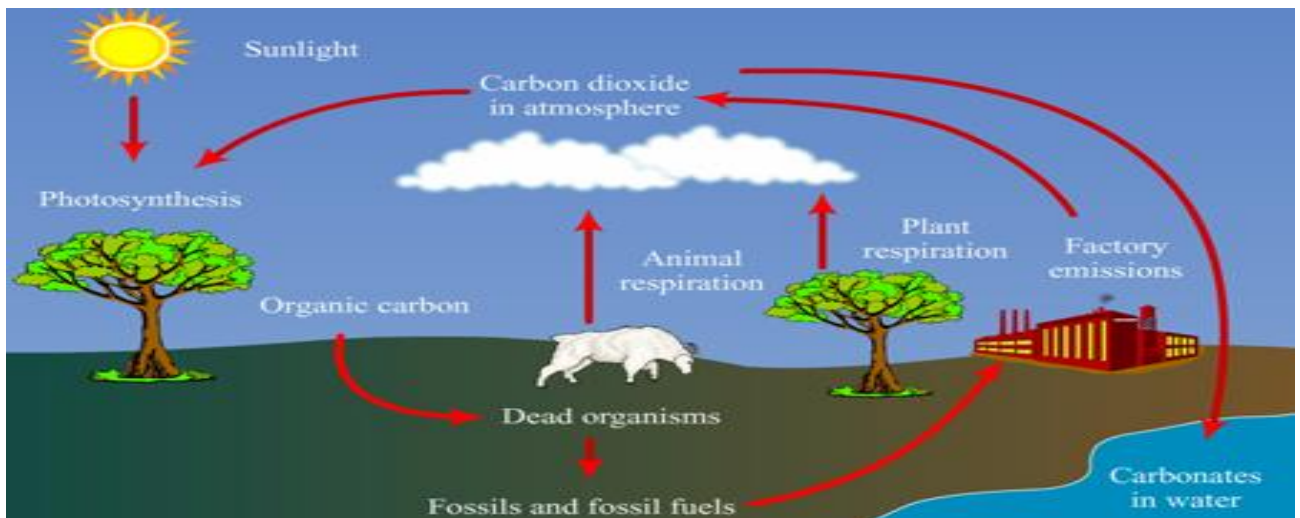
- g. When an animal or plant dies, decomposers (like bacteria) _____
- When that matter is broken down, carbon is released!
 - Some is released into the air, some stays in the _____. It can be turned into _____, like oil and coal.
2. The carbon can combine with oxygen to form _____, which plants use for photosynthesis.
- h. Sometimes too much fossil fuel is burned, which means too much carbon is released into the air. This can lead to the greenhouse effect.

SUMMARY

Summarize the points in your own words below:

- _____
- _____
- _____
- _____

2) Visualize it!



3) Quiz Yourself

- What causes the heat we feel on a hot, sunny day?
- Which organisms take in carbon dioxide?

- How does carbon dioxide cycle back and forth between plants?
- What happens to the carbon that has been in the soil for millions of years?
- What happens when gases, like carbon dioxide, get trapped in the atmosphere?
- What adds to the greenhouse effect and global warming?

RECORD YOUR SCORE BELOW

Your score: ____/7 and _____%

THE CARBON CYCLE — WINDOWS TO THE UNIVERSE GAME

[illegible]